

WHAT IS CLAIMED IS:

1. A method for service addressing, the method comprising:
receiving a data packet, the data packet including a data packet service address;
accessing a service definition database, the service definition database including a plurality
of service definition records, each of at least a subset of the plurality of service definition
records including
a service address field to store a service address, and
a plurality of network application entries, each of at least a subset of the plurality
of network application entries corresponding to a network application; and
identifying a service definition record having a service address corresponding to the data
packet service address, the identified service definition record including a plurality of
identified network application entries, the plurality of identified network application
entries including a first identified network application entry corresponding to a first
network application and a second identified network application entry corresponding to a
second network application, the first network application being different from the second
network application.
2. The method of claim 1, wherein the first network application is a first version of a
particular network application and the second network application is a second version of a
particular network application.
3. The method of claim 2, wherein the first version of the particular network application is
from a first vendor, the second version of the particular network application is from the second
vendor, and the first vendor is different from the second vendor.

4. The method of claim 2, wherein the particular network application is selected from the group consisting of an intrusion detection application, a virus detection application, a firewall application, a web switch, a network security application, and a load balancing application.

5. The method of claim 1, wherein:

the first network application is selected from the group consisting of an intrusion detection application, a virus detection application, a firewall application, a web switch, a network security application, and a load balancing application; and

the second network application is a different network application selected from the group consisting of an intrusion detection application, a virus detection application, a load balancing application, a virtual private network application, a firewall application, a web switch, a network security application, a proxy application, and a database application.

6. The method of claim 1, wherein:

receiving a data packet includes receiving a data packet having a data packet service port identifier; and

each of at least the subset of the plurality of network application entries includes a service port identifier field to store a service port identifier.

7. The method of claim 6, further comprising:

selecting a network application entry of the identified service definition record based at least in part on the data packet service port identifier.

8. The method of claim 1, wherein:

receiving a data packet includes receiving the data packet via a first network interface; and

each of at least the subset of the plurality of network application entries includes a received network interface field to store a received network interface identifier.

9. The method of claim 8, further comprising:

determining a data packet received network interface identifier based at least in part on

receiving the data packet via the first network interface; and

selecting a network application entry of the identified service definition record based at least in part on the data packet received network interface identifier.

10. The method of claim 7, wherein:

receiving a data packet includes receiving the data packet via a first network interface; and

each of at least the subset of the plurality of network application entries includes a received network interface field to store a received network interface identifier.

11. The method of claim 10, further comprising:

determining a data packet received network interface identifier based at least in part on

receiving the data packet via the first network interface; and

selecting a network application entry of the identified service definition record based at least in part on the data packet received network interface identifier.

12. The method of claim 1, wherein each of at least the subset of the plurality of network application entries includes a send via network interface field to store a send via network interface identifier.

13. The method of claim 1, wherein each of at least the subset of the plurality of network application entries includes a source address field to store a source address.

14. The method of claim 1, wherein each of at least the subset of the plurality of network application entries includes a destination logical address field to store a destination logical address.

15. The method of claim 13, wherein the destination logical address field to store a destination logical address is a destination internet protocol address field to store a destination internet protocol address.

16. The method of claim 1, wherein each of at least the subset of the plurality of network application entries includes a network application send address field to store a network application send address.

17. The method of claim 16, wherein the network application send address field to store a network application send address is a network application physical address field to store a network application physical address.

18. The method of claim 17, wherein the network application physical address field to store a network application physical address is a network application media access controller address field to store a media access controller address.

19. The method of claim 16, wherein the network application send address field to store a network application send address is a network application send logical address field to store a network application send logical address.

20. A method for service addressing, the method comprising:

receiving a data packet, the data packet including a service address and a service port identifier;

identifying a bundle of network applications based at least in part on the service address, the bundle of network applications including at least a first network application and a second network application, the first network application being different from the second network application;

selecting the first network application based at least in part on the service port identifier; and

sending at least a portion of the data packet to the first network application.

21. The method of claim 20, wherein:

receiving a data packet includes receiving the data packet via a first network interface; and

selecting the first network application based at least in part on the service port identifier includes selecting the first network application based at least in part on the service port identifier and the first network interface.

22. The method of claim 20, wherein:

receiving a data packet includes

receiving the data packet via a first network interface, and

determining a data packet received network interface identifier based at least in part on receiving the data packet via the first network interface; and

selecting the first network application based at least in part on the service port identifier includes selecting the first network application based at least in part on the service port identifier and the data packet received network interface identifier.

23. The method of claim 20, wherein the first network application is a first implementation of a particular network application and the second network application is a second implementation of a particular network application.

24. The method of claim 23, wherein the particular network application is selected from the group consisting of an intrusion detection application, a virus detection application, a load balancing application, a virtual private network application, a firewall application, a web switch, a network security application, a proxy application, and a database application.

25. A system for service addressing, the system comprising:

a first network interface to receive a data packet, the data packet including a data packet service address; and

service addressing logic, the service addressing logic coupled to the first network interface, the service addressing logic including a plurality of service definition records, each of at least a subset of the plurality of service definition records including

a service address field to store a service address, and

a plurality of network application entries, each of at least a subset of the plurality of network application entries corresponding to a network application, the plurality of network application entries including a first network application entry and a second network application entry, the first network application entry corresponding to a first network application, the second network application entry corresponding to a second network application, the first network application being different from the second network application.

26. The system of claim 25, wherein the first network application is a first version of a particular network application and the second network application is a second version of a particular network application.

27. The system of claim 26, wherein the particular network application is selected from the group consisting of an intrusion detection application, a virus detection application, a firewall application, a web switch, a network security application, and a load balancing application.

28. The system of claim 25, wherein:

the first network application is selected from the group consisting of an intrusion detection application, a virus detection application, a firewall application, a web switch, a network security application, and a load balancing application; and

the second network application is a different network application selected from the group consisting of an intrusion detection application, a virus detection application, a load balancing application, a virtual private network application, a firewall application, a web switch, a network security application, a proxy application, and a database application.

29. The system of claim 25, wherein:

the data packet includes a data packet service port identifier; and
each of at least a subset of the plurality of network application entries includes a service port identifier field to store a service port identifier.

30. The system of claim 29, further comprising:

means for selecting a network application entry of the identified service definition record based at least in part on the data packet service port identifier.

31. The system of claim 25, wherein:

each of at least the subset of the plurality of network application entries includes a received network interface field to store a received network interface identifier.

32. The system of claim 31, further comprising:

means for determining a data packet received network interface identifier based at least in

part on receiving the data packet via the first network interface; and

means for selecting a network application entry of the identified service definition record

based at least in part on the data packet received network interface identifier.

33. The system of claim 29, wherein:

each of at least the subset of the plurality of network application entries includes a received

network interface field to store a received network interface identifier.

34. The system of claim 33, further comprising:

means for determining a data packet received network interface identifier based at least in

part on receiving the data packet via the first network interface; and

means for selecting a network application entry of the identified service definition record

based at least in part on the data packet received network interface identifier.

35. The system of claim 33, wherein each of at least the subset of the plurality of network application entries includes a send via network interface field to store a send via network interface identifier.

36. The system of claim 33, wherein each of at least the subset of the plurality of network application entries includes a source address field to store a source address.

37. The system of claim 33, wherein each of at least the subset of the plurality of network application entries includes a destination logical address field to store a destination logical address.

38. The system of claim 33, wherein each of at least the subset of the plurality of network application entries includes a network application send address field to store a network application send address.

39. The system of claim 38, wherein the network application send address field to store a network application send address is a network application physical address field to store a network application physical address.

40. The system of claim 39, wherein the network application physical address field to store a network application physical address is a network application media access controller address field to store a media access controller address.

41. The system of claim 38, wherein the network application send address field to store a network application send address is a network application send logical address field to store a network application send logical address.

42. The system of claim 25, wherein:

the data packet includes a data packet service port identifier; and

each of at least a subset of the plurality of network application entries includes

a service port identifier field to store a service port identifier,

a received network interface field to store a received network interface identifier,

a send via network interface field to store a send via network interface identifier,

a source address field to store a source address,

a destination logical address field to store a destination logical address, and

a network application send address field to store a network application send address.

43. The system of claim 25, wherein the data packet uses one or more protocols from one of a TCP/IP network protocol suite and a UDP/IP network protocol suite.

44. The system of claim 43, wherein the one or more protocols include an IPv4 network protocol.

45. The system of claim 43, wherein the one or more protocols include an IPv6 network protocol.

46. The system of claim 25, wherein the data packet uses one or more of a layer 2 protocol, a layer 3 protocol, and a layer 4 protocol.

47. The system of claim 46, wherein the layer 2 protocol is selected from the group consisting of ATM and frame relay.

48. The system of claim 46, wherein the layer 3 protocol is MPLS.

49. The system of claim 25, wherein the service addressing logic lacks information that supports stateful processing.

50. The system of claim 25, wherein the service addressing logic includes information that supports stateful processing.

51. The system of claim 25, wherein the service addressing logic consists essentially of information that supports stateless processing.

52. A system for service addressing, the system comprising:

means for receiving a data packet, the data packet including a service address and a service port identifier;

means for identifying a bundle of network applications based at least in part on the service address, the bundle of network applications including at least a first network application and a second network application, the first network application being different from the second network application;

means for selecting the first network application based at least in part on the service port identifier; and

means for sending at least a portion of the data packet to the first network application.

53. The system of claim 52, wherein:

the means for receiving a data packet includes means for receiving the data packet via a first network interface; and

the means for selecting the first network application based at least in part on the service port identifier includes means for selecting the first network application based at least in part on the service port identifier and the first network interface.

54. The system of claim 52, wherein:

the means for receiving a data packet includes

means for receiving the data packet via a first network interface, and

means for determining a data packet received network interface identifier based at least in part on receiving the data packet via the first network interface; and

the means for selecting the first network application based at least in part on the service port identifier includes means for selecting the first network application based at least in part on the service port identifier and the data packet received network interface identifier.

55. The system of claim 52, wherein the first network application is a first implementation of a particular network application and the second network application is a second implementation of a particular network application.

56. The system of claim 55, wherein the particular network application is selected from the group consisting of an intrusion detection application, a virus detection application, a load balancing application, a virtual private network application, a firewall application, a web switch, a network security application, a proxy application, and a database application.

57. A process for service addressing, the process comprising:

a step for receiving a data packet, the data packet including a service address and a service port identifier;

a step for identifying a bundle of network applications based at least in part on the service address, the bundle of network applications including at least a first network application and a second network application, the first network application being different from the second network application;

a step for selecting the first network application based at least in part on the service port identifier; and

a step for sending at least a portion of the data packet to the first network application.

58. The process of claim 57, wherein:

the step for receiving a data packet includes a step for receiving the data packet via a first network interface; and

the step for selecting the first network application based at least in part on the service port identifier includes a step for selecting the first network application based at least in part on the service port identifier and the first network interface.

59. The process of claim 57, wherein:

the step for receiving a data packet includes

a step for receiving the data packet via a first network interface, and

a step for determining a data packet received network interface identifier based at least in part on receiving the data packet via the first network interface; and

the step for selecting the first network application based at least in part on the service port identifier includes a step for selecting the first network application based at least in part on the service port identifier and the data packet received network interface identifier.

60. The process of claim 57, wherein the first network application is a first version of a particular network application and the second network application is a second version of a particular network application.

61. The process of claim 60, wherein the particular network application is selected from the group consisting of an intrusion detection application, a virus detection application, a load balancing application, a virtual private network application, a firewall application, a web switch, a network security application, a proxy application, and a database application.

62. A computer-readable medium storing a plurality of instructions to be executed by a processor for service addressing, the plurality of instructions comprising instructions to:

receive a data packet, the data packet including a service address and a service port identifier;
identify a bundle of network applications based at least in part on the service address, the
bundle of network applications including at least a first network application and a second
network application, the first network application being different from the second
network application;
select the first network application based at least in part on the service port identifier; and
send at least a portion of the data packet to the first network application.

63. The computer-readable medium of claim 62, wherein
the instructions to receive a data packet include instructions to receive the data packet via a
first network interface; and
the instructions to select the first network application based at least in part on the service port
identifier include instructions to select the first network application based at least in part
on the service port identifier and the first network interface.

64. The computer-readable medium of claim 62, wherein:
the instructions to receive a data packet include instructions to
receive the data packet via a first network interface, and
determine a data packet received network interface identifier based at least in part
on receiving the data packet via the first network interface; and
the instructions to select the first network application based at least in part on the service port
identifier include instructions to select the first network application based at least in part
on the service port identifier and the data packet received network interface identifier.

65. The computer-readable medium of claim 62, wherein the first network application is a first implementation of a particular network application and the second network application is a second implementation of a particular network application.

66. The computer-readable medium of claim 65, wherein the particular network application is selected from the group consisting of an intrusion detection application, a virus detection application, a load balancing application, a virtual private network application, a firewall application, a web switch, a network security application, a proxy application, and a database application.